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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,857	06/15/2001	Paul Jeon	0630-1273P	6735

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[REDACTED] EXAMINER

ENG, GEORGE

ART UNIT	PAPER NUMBER
2643	

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)
	09/880,857	JEON ET AL.
	Examiner	Art Unit
	George Eng	2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 June 2001.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-12 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 15 June 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: network bridge 100 in figures 2-3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: pages 2-5, "PLC modem 70" should be --PLC modem 40-- in according to figure 1.

Appropriate correction is required.

Claim Objections

4. Claim 1 is objected to because of the following informalities: claim 1, line 6, "with" should be --with-- to be corrected. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 6-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 6, it is unclear whether the term “the network” in lines 3-4 referring to the phone line network or the power line network.

Claims 7-12 are also rejected because of depending on claim 6 containing the same deficiency.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by the prior art admitted by Applicant in the specification.

Regarding claim 1, the prior art admitted by Applicant in the specification discloses a conventional home network infrastructure system as shown in figure 1 comprising a phone line

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network (20) to which a first plurality of home information machines (40A to 40N) are connected, a power line network (60) to which a second plurality of home information machines (80A to 80N) are connected, a gateway system (10) connected with one of the telephone line network and the power line network for converting communication protocols of the telephone line network or power line network and an external network and transferring data signals between the telephone line network or power line network and the external network, and a router (50) read as a network bridge connected between the telephone line network (20) and the power line network (50) for enabling the first and second pluralities of home information machines to communicate data signals with each other between the telephone line network and the power line network (specification, page 2 line 5 through page 6 line 4). Note while the claimed language fails to clearly define the difference between the router and the network bridge. Thus, the prior art admitted by the Applicant is enough to met unduly broad claim.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art admitted by Applicant in the specification in view of Bullock et al. (US PAT. 6,107,912 hereinafter Bullock).

Regarding claims 2-5, the prior admitted by Applicant teaches the telephone line network including PNA modems (30A to 30N) so that each of the first plurality of home information machines (40A to 40N) connect to the telephone line network each including a PNA modem and the gateway system includes PNA modem (specification, page 3 lines 12-15 and page 5 lines 20-23). The prior art admitted by Applicant differs from the claimed invention in not specifically teaching the power line network including PNA modems each having a coupler for connecting to a power line so that the second plurality of home information machines (80A to 80N) connect to the power line network each including a PNA modem having a coupler for connecting to the power line. However, Bullock teaches an extension unit (103, figure 1, read as a coupler) coupled to a standard modem (102, figure 1) for connecting to a power line (108, figure 1) in order to make compatible with standard modem equipment for transferring data over the power line (abstract and col.3 line 50 through col. 4 line 55). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the prior admitted by Applicant in having the power line network including PNA (i.e., standard) modems each

having the coupler for connecting to the power line, as per teaching of Bullock, because it makes compatible with standard modem equipment for transferring data over the power line.

11. Claims 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art admitted by Applicant in the specification in view of Sanderson (US PAT. 6,040,759).

Regarding claim 6, the prior admitted by Applicant differs from the claimed invention in not specifically teaching the router including input protection means for protecting internal circuitry and removing unwanted electrical components of data signal flowing through the router, and matching means connected to the input means for matching impedance of the data signal and output means connected to the matching means for filtering the data signal. However, Sanderson teaches a communication system for providing data communication using a high voltage cable comprising a converter (1170, figure 9) connected between a twisted pair (1174, figure 9) and a power line (1302, figure 9) for adapting to a wide variation in communication impairments having an input protecting means (1314, figure 9) for protecting internal circuitry and removing unwanted electrical components of the data signal flowing on the converter, match means (1320, figure 9) for matching impedance of the data signal and output means for filtering the data signal, thereby cancels interference problems and prevents over-voltage, i.e., power surge (col. 9 line 34 through col.11 line 34). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the prior art admitted by Applicant including input protection means for protecting internal circuitry and removing unwanted electrical components of data signal flowing through the router, and matching means connected to the input means for matching impedance of the data signal and output means

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connected to the matching means for filtering the data signal, as per teaching of Sanderson, because it cancels interference problems and prevents over-voltage.

Regarding claim 7, Sanderson teaches to protect an over-voltage and a surge voltage and blocking means for blocking DC or AC components (col. 4 lines 62-65 and col. 9 line 60 through col. 10 line 44).

Regarding claim 8, Sanderson teaches the protecting means including a line filter for preventing interference signals (col. 5 lines 39-47).

Regarding claim 9, Sanderson teaches that a load impedance resistance value is adjustable (col. 11 lines 20-24) so that it recognizes to set the load impedance value in matching means as $10\text{ k}\Omega$.

Regarding claim 10, Sanderson teaches to isolate the distribution circuit for improving transmission of signals along the power cable, filtering means for band-pass the data signal and a socket for connecting the power line network (col. 5 lines 37-67).

Regarding claim 11, Sanderson teaches the transformer having a primary coil winding and a secondary coil winding (col. 10 lines 45-55), which the primary coil winding and the secondary coil winding obviously have the same number of coil winding with each other.

Regarding claim 12, Sanderson teaches to vary a band pass filter for passing certain range of frequency (col. 6 lines 31-44) so that it recognizes to adjust the band bass filter to pass only signals in range of $4.25\text{MHz}\sim 9.75\text{MHz}$.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kline (US PAT. 5,937,342) discloses a system to connect standard telephone subscriber equipment to a fixed wireless terminal over power lines (abstract). Nelson et al. (US PAT. 6,529,589) discloses a system for monitoring and controlling automation equipment comprising a modem establishing communication between automation equipment connected to a power line and remote user connected to a phone line (figure 2 and col. 7 line 60 through col. 8 line 65). Mowery, Jr. (US PAT. 6,492,897) discloses a system for communicating information to and from untethered subscriber device and tethered device by use of a power transmission line (abstract). Brodbeck (US PAT. 5,997,170) discloses a vending status reporting system utilizing an AC power system and a telephone communication system for sending vending status information to a collecting office (abstract). Brown (US PAT. 4,514,594) discloses a power line carrier telephone extension system (abstract). Chertok (US PAT. 3,876,984) discloses an apparatus for utilizing an AC power line to couple a remote terminal to a central computer in a communication system (abstract).

13. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

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Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, V.A., Sixth Floor (Receptionist).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Eng whose telephone number is 703-308-9555. The examiner can normally be reached on Tuesday to Friday from 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A. Kuntz, can be reached on (703) 305-4870. The fax phone number for the organization where this application or proceeding is assigned is 703-308-6306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.



George Eng

Examiner

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